UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/694,153 | 10/27/2003 | Eric Edward Lennon | 18231 | 3016 |

23556 7590 03/22/2006

KIMBERLY-CLARK WORLDWIDE, INC.
401 NORTH LAKE STREET
NEENAH, WI 54956

| EXAMINER | |
|---|---|
| BUTLER, PATRICK | |
| **ART UNIT** | **PAPER NUMBER** |
| 1732 | |

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/694,153 | LENNON ET AL. | |
| | Examiner | Art Unit | |
| | Patrick Butler | 1732 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *6-10 and 17-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,11-16 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20040126, 20050228*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-5, 11-15, and 23, drawn to a method, classified in class 264, subclass 465.

II. Claims 6-10, 17-20, drawn to an apparatus, classified in class 425, subclass 72.2.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as a method of making a nonwoven comprising collecting the fibers into a web on an immobile forming surface, such as a table or the floor.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Robert Ambrose on 22 August 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-5, 11-16, and 23. Affirmation of this election must be made by applicant in

replying to this Office action. Claims 6-10 and 17-22 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claim 2 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For purposes of examination, the term will be interpreted to mean location difference recognized by the art rather than a difference related to location measurement precision.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 11, and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/694,420. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim forming fiber, electrostatically directing it, and forming a web.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 11, and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/325,140. Although the conflicting claims are not identical, they are

not patentably distinct from each other because they claim forming fiber, electrostatically directing it, and forming a web.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 11, and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/687,006. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim forming fiber, redirecting it, which would include electrostatically, and forming a web.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Schmit (WO 02/34990 A1; USPAP 2004/0028763 A1 relied upon for translation and citations).

With respect to Claim 11, Schmit teaches forming fibers [0004], subjecting the fibers to pneumatic attenuation force in a drawing slot, the attenuation force imparting a velocity to the fibers [0004], reducing the velocity of the fibers in a diffusion chamber formed between opposed diverging sidewalls [0004], subjecting the fibers to an applied electrostatic charge while the fibers are in the diffusion chamber by one electrostatic charging unit located upon a diverging sidewall (see [0006] and Fig. 2, Ref. No. 17), and collecting the fibers into a web on a moving forming surface (see Fig. 1, Ref. No. 7).

Claims 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor (US Patent No. 6,783,722).

With respect to Claim 11, Taylor teaches providing a plurality of fibers F, subjecting the fibers to a pneumatic attenuation force in a drawing slot 18, the attenuation force imparting a velocity on the fibers, reducing the velocity of the fibers in a diffusion chamber 44 and subjecting the fibers to an applied electrostatic charge applied by a charging unit located on a diverging wall 58, and collecting the filaments on a moving web 30.

With respect to Claim 12, the charging units are oppositely directed and located on each of the diverging walls (see Fig. 2).

Claims 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations).

With respect to Claim 11, Maggio teaches providing a plurality of fibers F, subjecting the fibers to a pneumatic attenuation force in a drawing slot (see Fig. 3, at

Ref. No. 13), reducing the velocity of the fibers in a diffusion chamber 6, subjecting the fibers to an applied electrostatic charge 17 while the fibers are in the diffusion chamber, and collecting the fibers on a moving web surface 7.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Maggio '134 (WO 00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations).

With respect to Claim 23, Maggio '134 teaches providing a plurality of fibers F, subjecting the fibers to an attenuation force in a drawing slot (at Fig. 3, Ref. No. 13), subjecting the fibers to a electrostatic charging unit 11 located on the sidewall, reducing the velocity of the fibers in a diffusion chamber being formed substantially between opposed diverging sidewalls 15, and collecting the fibers onto a web of a moving surface 7. The attenuation force is provided by attenuation air entering the drawing slots 21 only, and the attenuation air is from the drawing slot sidewall opposing the drawing slot sidewall since the slots are on both sides.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/05071) in view of Maggio '134 (WO 02/00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations).

With respect to Claim 1, Haynes '071 teaches providing a plurality of fibers 12, subjecting the fibers to a pneumatic attenuation force in a drawing slot 14, the attenuation force imparting a velocity to the fibers, subjecting the fibers to an applied electrostatic charge before the fibers at the end of the draw slot 18/22, the charging units being oppositely directed (see Fig. 1), and collecting the fibers into a web on a moving surface 26.

Haynes '071 does not expressly teach providing a diffusion chamber.

Maggio teaches providing a diffusion chamber 6 after the drawing slot 5.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Maggio '134's diffusion chamber with Haynes '071 nonwoven web process in order to adjust the width of the bundle of fibers and impact speed of the filaments on the receiving belt (see col. 3, lines 39-43).

With respect to Claim 3, Maggio '134's sidewalls are unvented (See Fig. 3, Ref. No. 15).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/05071) in view of Maggio '134 (WO 00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations) as applied to Claim 1, and further in view of Trimble (WO 93/21370).

With respect to Claim 2, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio '134 do not appear to expressly teach having one electrostatic charging unit located substantially closer to the diffusion chamber than at least one other electrostatic charging unit.

Trimble teaches making the electrostatic charging units locations staggered (substantially closer to the diffusion chamber than at least one other electrostatic charging unit) (see Fig. 4, Ref. No. 74 and page 15, lines 24-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Trimble's charging unit positions with Haynes '071's and Maggio '134's non-woven web forming process in order to form a more even distribution of filaments in the web (see Trimble, page 20, lines 14-16) and because it is an alternative embodiment of a known charging unit configuration.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/05071) in view of Maggio '134 (WO 02/00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations) as applied to Claim 1, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 4, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio do not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the drawing chambers 16 of Haynes '071 and Maggio '134 in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.

With respect to Claim 5, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio '134 do not appear to expressly teach at least one of the opposed diverging sidewalls comprises at least one vortex generator.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the (Maggio '134's) diffusion chamber 14 of Haynes '071 and Maggio '134 because it would cause gas flow turbulence (see Haynes '379 col. 1, lines 62-67), and it is desirous to slow down the air flow at the exit of the diffusion chamber in order to distribute the filaments randomly over a receiving belt (see Maggio '134, col. 1, lines 55-57).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) as applied to Claim 11, and further in view of Haynes '071 (WO 02/05071).

With respect to Claim 12, Maggio '381 teaches a process for forming a non-woven as previously described.

Maggio '381 does not appear to expressly teach having oppositely directed electrostatic charging units and at least one electrostatic charging unit is located upon each of the diverging sidewalls.

Haynes '071 teaches that subjecting the fibers charging units 18/22 being oppositely directed (see Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Haynes '071's oppositely directed charging units in the diverging sidewalls of Maggio '381 in order to give improvements maximum overall voltage (see Haynes '071, page 16, Table 1), improve formation (page 16, lines 33-35), and because it is a known configuration for electrostatic charging.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) in view of Haynes '071 (WO 02/05071) as applied to Claim 12, and further in view of Trimble (WO 93/21370).

With respect to Claim 13, Maggio '381 and Haynes '071 teach a process of making a non-woven as previously described.

Maggio '381 and Haynes '071 do not appear to expressly teach having one electrostatic charging unit located substantially closer to the diffusion chamber than at least one other electrostatic charging unit.

Trimble teaches making the electrostatic charging units locations staggered (substantially closer to the diffusion chamber than at least one other electrostatic charging unit) (see Fig. 4, Ref. No. 74 and page 15, lines 24-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Trimble's charging unit positions with Maggio '381's and Haynes '071's non-woven web forming process in order to form a more even distribution of filaments in the web (see Trimble, page 20, lines 14-16) and because it is an alternative embodiment of a known charging unit configuration.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) as applied to Claim 11, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 14, Maggio '381 teach a process of making a non-woven as previously described.

Maggio '381 does not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the slot of Maggio '381 in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time

spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.

Claims 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmit (WO 02/34990 A1; USPAP 2004/0028763 A1 relied upon for translation and citations) as applied to Claim 11, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 14, Schmit teaches a process of making a non-woven as previously described.

Schmit does not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the slot of Schmit in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.

With respect to Claim 15, Schmit teaches that the diffuses can have no openings (unvented) (see [0010]. Though Schmit states "preferably" with respect to having vents, this is merely a preferred embodiment.

With respect to Claim 16, Schmit teaches a process of making a non-woven as previously described.

Schmit does not appear to expressly teach that at least one of the opposed diverging sidewalls comprises at least one vortex generator.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the from the lateral openings16 of the diffusion chamber 14 of Schmit because it would cause gas flow turbulence (see Haynes '379 col. 1, lines 62-67), which would spread the fiber curtain, it is desirous to spread the curtain since it increases uniformity of the web (see Schmit [0004]).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is 571-272-8517. The examiner can normally be reached on Monday through Friday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PB

Patrick Butler
Assistant Examiner
Art Unit 1732

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER